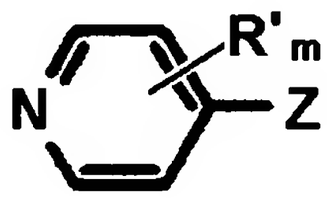
What is claimed is:

1. A method for producing polypyridinium comprising reacting a polymerization initiator and a monomer represented by the chemical formula below

[Chemical Formula 1]

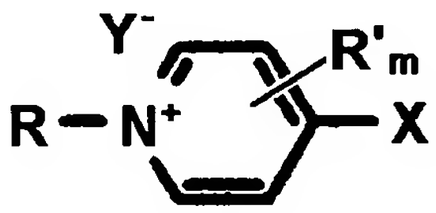


in an organic solvent in the presence of a dissolution accelerating agent comprising hydrophobic anions, where R' represents a hydrogen atom, an alkyl group, an alkoxy group, a halogen atom, a nitro group, an ester group or an aromatic ring forming a condensed ring with the pyridine ring, m is an integer from 1 to 4 and Z represents a halogen atom,

wherein the polymerization initiator is 4-halopyridinium or its derivatives, 4-haloquinolinium or its derivatives, 9-haloacrydinium or its derivatives, 2- or 4-halopyrimidine or their derivatives, 3- or 4-halopyridazine or their derivatives, 2-halopyrazine or its derivatives, 2-, 4- or 5-haloimidazole or their derivatives, 3-, 4- or 5-halopyrazole or their derivatives, 3-, 4- or 5-haloisothiazole or their derivatives, 3-, 4- or 5-haloisooxazole or their derivatives, halotriazine, mononitro or polynitrohalobenzene or their derivatives, or polycyanohalobenzene or its derivatives.

2. The method of claim 1 wherein the polymerization initiator is a 4-halopyridinium represented by the chemical formula below

[Chemical Formula 2]



or its derivatives, where R represents $R''(CH_2)_n$-, wherein R" represents a hydrocarbon group or a heterocyclic group and n represents an integer that is at least one, or an aryl group or a heterocyclic ring that may contain substituents, however, the heterocyclic group has its carbon atom bonded to the nitrogen atom in the pyridine ring, X represents a halogen atom, Y represents an anion soluble in the organic solvent, and R' and m are, independently, defined as above.

3. The method of claim 2 wherein Y^- is a halide ion, perchlorate ion, tetrafluoroborate ion, hexafluorophosphate ion or tetraphenyl borate ion, X and Y are chlorine atoms or bromine atoms, and the hydrophobic anion is a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion, a tartarate ion, a citrate ion, a nicotinate ion, or a phosphate ion containing a binaphthyl group.

4. The method of any one of claims 1 to 3 wherein the dissolution accelerating agent is tetrabutylammonium perchlorate, tetrabutylammonium tetrafluoroborate, tetrabutylammonium hexafluorophosphate, sodium perchlorate, sodium tetrafluoroborate, sodium hexafluorophosphate, tetraethylammonium perchlorate, tetraethylammonium tetrafluoroborate, tetraethylammonium hexafluorophosphate, sodium tetraphenylborate, sodium p-toluenesulfonate, sodium alkylsulfonate having 6 to 24 carbon atoms, sodium alkylphosphate having 6 to 24 carbon atoms, or phospholipids having 6 to 24 carbon atoms.

5. The method of claim 4 wherein the dissolution accelerating agent is tetrabutylammonium tetrafluoroborate.

6. The method of claim 5 wherein the polymerization initiator is N-(4'-tert-butylbenzyl)-4-chloropyridinium and the monomer is 4-chloropyridine.

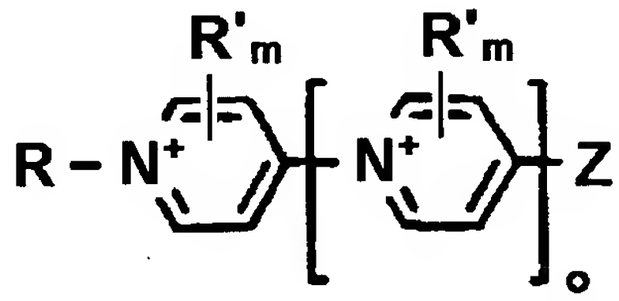
7. The method of any one of claims 1 to 6 further comprising reacting the reaction product with a polymerization terminating agent, wherein the polymerization terminating agent is pyridine, quinoline or acrydine substituted with amino groups, alkoxy groups or alkyl groups or their derivatives, triphenylphosphine or its derivatives, or amine derivatives substituted with alkyl groups or allyl groups.

8. The method of claim 7 wherein the polymerization terminating agent is added to the reaction solution to allow the reaction material to react with the polymerization terminating agent.

9. A polypyridinium produced by the method of any one of claims 1 to 8.

10. The polypyridinium of claim 9 wherein the polypyridinium is represented by the chemical formula below,

[Chemical Formula 3]



where R, Z, R' and m are as defined above and o is 1 to 300.